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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,660	03/01/2004	Murali Basavaiah	ANDIP037A	2700

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EXAMINER
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UNELUS, ERNEST

ART UNIT	PAPER NUMBER
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2187

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/791,660	<b>Applicant(s)</b> BASAVIAH ET AL.	
	<b>Examiner</b> Ernest Unelus	<b>Art Unit</b> 2187	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/01/04, 03/29/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The instant application having Application No. 10/791,660 has a total of 23 claims pending in the application; there are 2 independent claims and 21 dependent claims, all of which are ready for examination by the examiner.

#### **I. INFORMATION CONCERNING OATH/DECLARATION**

##### **Oath/Declaration**

2. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in 37 C.F.R. 1.63.

#### **II. INFORMATION CONCERNING DRAWINGS**

##### **Drawings**

3. The applicant's drawings submitted are acceptable for examination purposes.

#### **III. ACKNOWLEDGEMENT OF REFERENCES CITED BY APPLICANT**

4. As required by M.P.E.P. 609(C), the applicant's submissions of the Information Disclosure Statements dated March 01, 2004 and March 29, 2004 are acknowledged by the examiner and the cited references have been considered in the examination of the claims now pending. As required by M.P.E.P 609 C(2), a copy of the PTOL-1449 initialed and dated by the examiner is attached to the instant office action.

#### **IV. REJECTIONS NOT BASED ON PRIOR ART**

**Claim Rejections - 35 USC § 112**

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claim1** recites the limitation "write frame" in line 5 of the claim. There is insufficient antecedent basis for this limitation in the claim. The limitation "write frame" was not previously mention.

claim 1 recites the limitation "OX\_ID or RX\_ID" in line 8 of the claim.

There is insufficient antecedent basis for this limitation in the claim. The limitation "OX\_ID or RX\_ID" was not previously mention.

claim 1 also recites an "If" limitation in line 5 of the claim. There is insufficient antecedent basis for this limitation in the claim. The claim doesn't disclose what would happen for the "if" statement.

**V. REJECTIONS BASED ON PRIOR ART**

**Double Patenting**

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

**Claims 1-23** of the current applicant objected to under 37 CFR 1.75 as being a substantial duplicate of claims 1-23 of copending Application No. 10/726,269. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

1. Furthermore, it should be noted that the present application and Application No. 10/726,269 have the same inventive entity and the same assignee for both applications is CISCO TECHNOLOGY, INC.

1. Claim 1 is compared to claim 1 of application 10/791,660 in the following table:

<b>Instant Application</b>	<b>Application 10/791,660</b>
An apparatus, comprising: a Switch, the Switch including: a port configured to receive a write command defining an initiating Host and a target; a trapping mechanism configured to trap the write frame if the write command designates a predetermined Host_ID and a predetermined target_ID; and a processor configured to process trapped write commands by modifying either the OX_ID or RX_ID of the write command header	An apparatus, comprising: a Switch, the Switch including: a port configured to receive a write command defining an initiating Host and a target; a trapping mechanism configured to trap the write frame if the write command designates a predetermined Host_ID and a predetermined target_ID; and a processor configured to process trapped write commands by modifying either the OX_ID or RX_ID of the write command header

***This is a provisional statutory type (35 U.S.C 101) double patenting rejection since the conflicting claims have not yet been patented. The double patenting rejection is also***

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*applicable to claims 2-23 in the current applicant and claims 2-23 of the copending applicant*

*10/726,269.*

**Claim Rejections - 35 USC § 102**

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1-23** are rejected under 35 U.S.C. 102(e) as being anticipated by Mullendore et al. (US 2003/0185154).

8. As per **claim 1**, Mullendore discloses “an apparatus, comprising: a Switch (150), the Switch including: a port (paragraph 0027 discloses “the switch device typically includes a processor, a buffer, a first port for coupling to a low speed or TCP/IP based network link”) configured to receive a write command (write 16MB) defining an initiating Host (initiator 135) and a target (target 145) (see fig. 4); a trapping mechanism (paragraph 0046 discloses the buffer held the command within the switch) configured to trap the write frame (write 16MB) (see fig. 4) if the write command (write 16MB) designates a predetermined Host\_ID (the initiator,135, ID) and a predetermined target\_ID (the target, 145, ID) (each command within a fibre channel protocol discloses the sender and the target identity, as discloses in paragraph 0054.); and a processor (the processor within the switch, as discloses in

**paragraph 0027)** configured to process trapped write commands by modifying either the OX\_ID or RX\_ID of the write command header (**paragraphs 0029 and 0061 discloses the processor within the switch is able partially transfer the write command, which is to modify it. In the art, as also discloses by the applicant in paragraph 0026, a command's address identify where it's coming from and where it's going, which is the originator exchange ID and the responder exchange ID. Every write or read command from an initiator or target has an address that identify the command, as also disclosed in paragraph 0054).**

9. As per **claim 2**, Mullendore discloses “the apparatus of claim 1 (see **claim 1 above**), wherein the Switch (150) is an initiating Switch coupled to the Host (135) in a first SAN (165) (see **fig. 4**)

10. As per **claim 3**, Mullendore discloses “wherein the processor of the initiating Switch (165) is further configured to modify the write command before forwarding the write command to the target (145) (**paragraphs 0029 and 0061 discloses the processor within the switch is able partially transfer the write command, which is to modify it).**

11. As per **claim 4**, Mullendore discloses wherein the initiating Switch (150) is further configured to modify the write command (**write 16MB**) by modifying the OX\_ID value for the write command before forwarding the write command to the

target (paragraphs 0029 and 0061 discloses the processor within the switch is able partially transfer the write command, which is to modify it. In the art, as also discloses by the applicant in paragraph 0026, a command's address identify where it's coming from and where it's going, which is the originator exchange ID and the responder exchange ID. Every write or read command from an initiator or target has an address that identify the command, as also disclosed in paragraph 0054).

12. As per claim 5, Mullendore discloses wherein the initiating Switch (150) uses the initialized RX\_ID value (XFER\_RDY 256KB) as a handle for accessing information pertaining to the write command session (write 16MB) (see fig. 4) in a sessions ID table (fig. 8 is an example of a session ID table).

13. As per claim 6, Mullendore discloses wherein the processor of the initiating Switch (135) is further configured to issue a Transfer Ready command (XFER\_RDY 256KB) to the Host (135) (see fig. 4).

14. As per claim 7, Mullendore discloses wherein the initiating Switch (150) is further configured to initialize and use the initialized RX\_ID value (XFER\_RDY 256KB) for all communication related to the write frame (16MB) between the initiating Switch (150) and the Host (135) (see paragraph 0061 and fig. 4).

15. As per claim 8, Mullendore discloses wherein the initiating Switch (150) is further configured to modify the OX\_ID value (16MB) with communications

between the initiating Switch (150) and the target (145) (see fig. 4).

16. As per **claim 9**, Mullendore discloses wherein the initiating Switch (150) is further configured to transfer additional data frames (256KB) (paragraph 0061 discloses that the switch separate the command into smaller portions and send those portions (256KB) separately to the target) to the target (145) when the initiating Switch (150) receives a Transfer Ready command (XFER\_RDY 256KB) associated with the write frame (write 16MB) from the target (see fig. 4).

17. As per **claim 10**, wherein the Switch (140) is a target Switch coupled to the target (145).

18. As per **claim 11**, Mullendore discloses wherein the target Switch (140) forwards the write command (16MB) to the target (145) (see fig. 4).

19. As per **claim 12**, Mullendore discloses wherein the target Switch (140) forwards data frames (128KB) associated with the write command (16MB) to the target (145) after receiving a Transfer Ready command (XFER\_RDY 128KB) from the target (145) (see fig. 4).

20. As per **claim 13**, Mullendore discloses wherein the target Switch (140) is further configured to buffer the data frames (128KB) prior to receipt of the Transfer Ready command (XFER\_RDY 128KB) see paragraph 0061 and fig. 4.

21. As per **claim 14**, Mullendore discloses wherein target Switch (140) is

further configured to maintain **(the buffer inside the switch having a identified data )** a sessions ID table **(fig. 8 is an example of a session ID table)** and to use the OX\_ID **(the data identifier from the host)** of the write command as an index to the session corresponding to the write command **(see paragraphs 0054 and 0061).**

23. As per **claim 15**, Mullendore discloses wherein the target Switch **(140)** is further configured to modify the RX\_ID value **(XFER\_RDY 256KB)** for all communication related to the write frame **(16MB)** between the target Switch **(140)** and the Host **(135)**. **(paragraphs 0029 and 0061 discloses the processor within the switch is able partially transfer the write command, which is to modify it.**

24. As per **claim 16**, Mullendore discloses wherein the target Switch **(140)** is further configured to modify the OX\_ID value **(write 16MB)** with communications between the target Switch **(140)** and the target **(145)**. **(paragraphs 0029 and 0061 discloses the processor within the switch is able partially transfer the write command, which is to modify it.**

25. As per **claim 17**, Mullendore discloses wherein the Switch is further configured to use the RX\_ID value **(XFER\_RDY 256KB)** of trapped write commands **(write 16MB)** to specify the amount of buffer space needed for the write command and use the write command frame to request the needed buffer space **(see paragraph 0061).**

26. As per **claim 18**, Mullendore discloses wherein the Switch (150) is further configured to use the RX\_ID value (**XFER\_RDY 256KB**) of trapped write commands (**write 16MB**) to specify the amount of buffer space larger than needed for the write command and use the additional buffer space for subsequent write commands so that the Switch need not wait for a Transfer Ready command to transfer data related to the subsequent write command (see **paragraph 0061**).

27. As per **claim 19**, Mullendore discloses wherein the Switch (150) is further configured to, in the event the Switch does not have sufficient buffer space for the write command (**write 16MB**) (see **paragraph 0064**), to either: (i) generate a busy status signal to the initiating Host; (ii) placing the write command on a pending wait list (**paragraph 0064 discloses, “then switch 150 holds the RTT message until buffer resources become sufficient to receive the entire write data specified by the RTT message ”**) ; or (iii) forwarding the write command to the target (see **paragraph 0070**).

28. As per **claim 20**, Mullendore discloses a first SAN (360) including the Switch (**switch A or B**); a second SAN (365) including a second Switch (**switch C or D**); and an inter-SAN network (310) connecting the first SAN and the second SAN (see **fig. 13**).

29. As per **claim 21**, Mullendore discloses “a method comprising: trap write

commands (**write 16MB**) specifying a predesignated Host ID corresponding to a Host and target ID corresponding to a target and including an OX\_ID value and an un-initialized RX\_ID value at a Switch (150) **(In the art, as also discloses by the applicant in paragraph 0026, a command's address identify where it's coming from and where it's going, which is the originator exchange ID and the responder exchange ID. Every write or read command from an initiator or target has an address that identify the command, as also disclosed in paragraph 0054);** configuring the Switch to forward the write command to the target (see paragraph 0061); configuring the Switch to initialize the RX\_ID of the write command (paragraphs 0029 and 0061 discloses the processor within the switch is able partially transfer the write command, which is to initialize it; and configuring the Switch to generate a Transfer Ready command including the initialized RX\_ID value (**XFER\_RDY 256KB**) to the Host (135) as a proxy for the target (145) (see fig. 4 and paragraph 0061).

30. As per claim 22, Mullendore discloses the method of claim 21 (see **claim 1 above**), further comprising configuring the Switch (140) to forward data frames (**data 128KB**) associated with the write command (**write 16MB**) received in response to the Transfer Ready command (**XFER\_RDY 256KB**) to the target (145) (see fig. 4).

31. As per claim 23, Mullendore discloses receiving the write command (**write 16MB**) forwarded to the target (145) by the Switch (150) at a second

Switch (140); configuring the second Switch (140) to forward the write command to the target (see fig. 4); and either: buffering the data frames forwarded to the target by the Switch until a Transfer Ready command is received from the target (see paragraph 0064); or forwarding the data frames (data 128KB) from the Switch (140) to the target (145) if the Transfer Ready command (XFER\_RDY 128KB) has already been received from the Host (140) (see fig. 4).

#### **VI. RELEVANT ART CITED BY THE EXAMINER**

31. The following prior art made of record and not relied upon is cited to establish the level of skill in the applicant's art and those arts considered reasonably pertinent to applicant's disclosure. See MPEP 707.05(c).

The following reference teaches a switch to modify the write command before forwarding the write command to the target.

#### **U.S. PATENT NUMBER**

Us 6,400,730

US 6,880,062

US 6,683,883

#### **IX. CLOSING COMMENTS**

##### **Conclusion**

##### **a. STATUS OF CLAIMS IN THE APPLICATION**

8. The following is a summary of the treatment and status of all claims in the application as recommended by M.P.E.P. 707.07(i):

**a(1) CLAIMS REJECTED IN THE APPLICATION**

9. Per the instant office action, claims 1-23 have received a first action on the merits and are subject of a first action non-final.

**b. DIRECTION OF FUTURE CORRESPONDENCES**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernest Unelus whose telephone number is (571) 272-8596. The examiner can normally be reached on Monday to Friday 9:00 AM to 5:00 PM.

**IMPORTANT NOTE**

11. If attempts to reach the above noted Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Donald Sparks, can be reached at the following telephone number: Area Code (571) 272-4201.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 28, 2006

Ernest Unelus  
Examiner  
Art Unit 2187



**DONALD SPARKS  
SUPERVISORY PATENT EXAMINER**